

VERIFICATION OF TRANSLATION

I, Mariko Mizutani, translator of 6th floor, Yodogawa 5-Bankan, 3-2-1 Toyosaki, Kita-Ku, Osaka, Japan, hereby declare that I am conversant with the English and Japanese languages and am a competent translator thereof. I further declare that to the best of my knowledge and belief the following is a true and correct translation made by me of JP Unexamined Utility Model Application Publication No. S51-126995.

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Date: January 10, 2007

A handwritten signature in cursive script, appearing to read "Mariko Mizutani".

Mariko MIZUTANI

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Utility Model Application

Publication of Unexamined Utility Model Application
Publication No. S51-126995

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To Hideo SAITO, Director of Patent Office:

1. Title of the Device: **MEDICAL BED**

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(Note: Power of Attorney is the one submitted for our another utility model application filed on the same day.)

Application No. S50-047994 stamped by Formality Examination Division

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SPECIFICATION

1. Title of the Device

MEDIAL BED

2. Claims of Utility Model

A medical bed comprising:

an upper-body underframe configured to be rotatable in a lengthwise direction of the bed;

an upper platform mounted on the underframe, the upper platform including:

a lower plate divided into three sections that are disposed next to one another in a widthwise direction of the bed, the middle section being fixed at one edge to the underframe in a manner to allow rotatable movement in the widthwise direction of the bed,

an upper plate being a movable platform and fixed at one edge to the other edge of the lower plate in a manner to allow rotatable movement in the widthwise direction of the bed; and

push-up bars provided one for each of the lower and upper plates,

wherein the underframe rotates unitary with the upper platform in the lengthwise direction of the bed, and

wherein simultaneously with the rotation, the movable platform is rotated to be tilted toward right or left, by one or both of the push-up bars upwardly pushing the upper plate only or both the upper and lower plates.

3. Detailed Description of the Device

The present device relates to a medical bed having both a postural change assistance function and a Gatch-up function. There have been beds assisting users, typified by patients to take a suitable posture. For example, some conventional beds are capable of elevating a floor plate that is composed of a plurality of sections. With this mechanism, the beds assist a user to take a sit-position on a chair (Gatch position). In addition, there have been beds assisting postural change for preventing bedsores.

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The present device provides a medical bed having both the above functions. The following describes an embodiment of the present device, with reference to the accompanying drawings.

A reference numeral 1 denotes an underframe composed of an upper-back underframe 2 and a lower-back underframe 3 both of which are rotatable in a longitudinal direction of the bed. Mounted on the underframe 1 is an upper platform 4 composed of three sections arranged next to one another in the widthwise direction of the bed. The middle section of the upper platform 4 is composed of a lower plate 6 and an upper plate 8 that together constitute a movable platform 9. The lower plate 6 is fixed at one edge 5 to the underframe 1 so as to be freely rotatable in the widthwise direction of the bed. The upper plate 8 is fixed at one edge 7 to the other edge 7' of the lower plate 6. In addition, the other two sections of the upper plate 4 by which the movable platform 9 is flanked constitute fixed platforms 10.

Each reference numeral 11 denotes a working bar provided below the underframe 1. The reference numerals 12 and 13 are push-up bars provided for the lower plate 6 and the upper plate 8, respectively. Yet, neither of the push-up bars 12 and 13 is fixed to the respective plates. Rather, the push-up bars 12 and 13 are configured to make a sliding-engagement to push up the respective plates. Note that the working bar 11 may be of any configuration as long as the working bar 11 rotates the underframe.

With the above structure, the bed appropriately assists the user to take a Gatch position by raising his upper and lower back. More specifically, the coupling bars 14 and 14' are hydraulically or pneumatically moved in the laterally outward directions in the figure. With this movement, the underframe 1 as well as the upper plate 4 is rotated to be raised as illustrated in Fig. 3, so that the user takes a sit-position on the bed. Here, the bed may be operable so as to separately raise the upper and lower back of the user. To assist the user to turn from side to side in the bed, the coupling bars 15 and 16 are hydraulically or pneumatically moved in the left direction in the figure. As a result of this movement, the push-up bar 12 comes to push up the lower surface of the

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lower plate 6. The lower plate 6 is thus tilted unitary with the upper plate 8 toward the right-hand side of the figure. As a result, the user's body is raised to be tilted downwardly toward the right-hand side of the figure. In the above-described manner, the bed assists the user to change his position by tilting the body of the user toward right and left, which completely prevents bed sores. According to the present device, in addition, the middle section constituting the movable platform tilts the entire upper-body of the user. This allows the user to turn his body in a natural manner without feeling any pressure on, for example, his abdomen.

Having both the postural change assistance function and the Gatch-up function, the bed according to the present device is suitably used for users including a patient suffering from muscular dystrophy or profound psychosomatic disorder and a bedridden elderly. The bed achieves to prevent bed sores. In addition, the bed achieves to assist the users to freely change his position with no uncomfortable pressure.

4. Brief Description of Drawings

Fig. 1 illustrates an overall bed under a Gatch position assistance state according to the present device;

Fig. 2 illustrates the overall bed under a postural change assistance state according to the present device;

Fig. 3 illustrates the bed seen from the longitudinal direction; and

Figs. 4(a) and 4(b) illustrates the bed seen from the widthwise direction.

Reference Numerals

1	Underframe
2	Upper-Back Underframe
3	Lower-Back Underframe
4	Upper Platforms
5	Edge
6	Lower Plate

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7, 7'	Side
8	Upper Plate
9	Movable Platform
10	Fixed Platform
11	Working Bar
12, 13	Push-Up Bars
14, 14'	Coupling Bars
15, 16	Coupling Bars

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(1,500円)

実用新案登録願 (B) 後記号なし

昭和50年4月9日

特許庁長官 斎藤 英雄 殿

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5. 添付書類の目録

- | | |
|-------------|-----|
| (1) 明細書 | 1 通 |
| (2) 図面 | 1 通 |
| (3) 願書副本 | 1 通 |
| (4) 委任状 | 1 通 |
| (5) 出願審査請求書 | 1 通 |

(尚委任状)は同時出願の実用新案登録願(A)に添付のものを援用します。)

50-047994

方式
審査



明 細 書

1. 考案の名称

医療用ベッド

2. 実用新案登録請求の範囲

ベッド長手方向に回動自在に構成した上半身側下床枠の上部に、ベッド短手方向に三分割し、その中央部は一侧を前記下床枠に、ベッド短手方向に回動自在に固定した下床と、一侧を該下床の他側に、ベッド短手方向に回動自在に固定した上床から成る可動床とした上床板を載置し、前記下床枠は前記上床板と一体にベッド長手方向に回動させると同時に、可動床は下床および上床のそれぞれに対応して設けた押上杆により、上床のみあるいは上床と下床を一体に回動させて左方あるいは右方に回動することを特徴とする医療用ベッド。

3. 考案の詳細な説明

本考案は寝返り機能、ギャツヂ機能を同時に具えた医療用ベッドに関するものである。従来患者等のベッド使用者に最適な体位を供する為に、複数に分割された床板を回動上昇させて、例えば便

用者がベッド上であたかも椅子に座っている状態（ギャツヂ状態）にしたり、あるいは床づれを防ぐために寝返りを行なえるようにしたベッドがある。本考案はこれらの機能と同時に見えた医療用のベッドを提供するもので以下実施例を示す図面に基づいて詳細に説明すると次の通りである。

符号 1 はベッド長手方向に回動自在に構成した背部下床枠 2 及び腰部下床枠 3 から成る ~~上半身~~ 下床枠であり、該下床枠 1 の上部には、ベッド短手方向に三分割した上床板 4 を載置する。該上床板 4 の中央部は、一側部 5 を前記下床枠 1 に、ベッド短手方向に回動自在に固定した下床 6 と、一側部 7 を該下床の他側部 7' に、ベッド短手方向に回動自在に固定した上床 8 から成る可動床 9 とし、また該可動床 9 の左右の床は前記下床枠 1 に固定して固定床 10 とする。

符号 11 は前記下床枠 1 の下側に設けた作動杆であり、符号 12、13 はそれぞれ前記可動床 9 の下床 6、上床 8 に対応して設けた押上杆である。かかる際、該押上杆 12、13 は下床、上床には

固定せず、摺動しつつ押上げる構成とする。尚作動杆 1 1 は下床枠 1 を回動させるものであれば周知のいかなる構成を用いても良い。

しかして、背部及び腰部を起伏させギャツヂ状態にする場合には、手動あるいは電動機、油圧、空気圧等により連結杆 1 4、1 4' を図中左又は右の方向に移動させると、下床枠 1 は上床板 4 と一体に回動上昇して第 3 図の如く起伏する。かかる状態において使用者はベッド上においてあたかも椅子に座っているようになる。この場合、背部と腰部はそれぞれ個別に起伏させてもよい。次に使用者が身体の寝返りをする場合には、手動あるいは電動機、油圧、空気圧等により連結杆 1 5 を図中左方に移動すると、押上杆 1 2 は下床 6 の下面を押圧し、しかして該下床 6 は上床 8 と一体に、図中右方に回動し、使用者の身体を右方に傾ける。また、連結杆 1 6 を図中右に移動すると押上杆 1 3 は上床 8 の下面を押圧し、しかして該上床 8 は単独で図中左方に回動し、使用者の身体を左方に傾ける。かかる如く使用者は身体の上半身部を

1 字訂

左、右に傾けられて寝返りを行なえ、床づれを完全に防止することができる。かかる際本考案は、中央部の可動床により、使用者の身体の上半身部全体を傾けるため、身体は極めて自然な形で腹部等に、何らの圧迫感もなく寝返りを行ない得る。

本考案は以上の通りギャツヂ機能および寝返り機能を同時に具えているので、例えば筋ジストロフィー患者、重心身障害者、ねたきり老人等のベッドとして使用して床づれを防ぎ、体位を自由に変更できると共に、かかる際にも使用者に不快な圧迫感を全く与えない効果を有する。

4. 図面の簡単な説明

第1図はギャツヂ状態を示す本考案の全体説明図、

第2図は寝返り状態を示す本考案の全体説明図、

第3図はベッド長手方向の説明図、第4図(a)(b)は短手方向の説明図である。

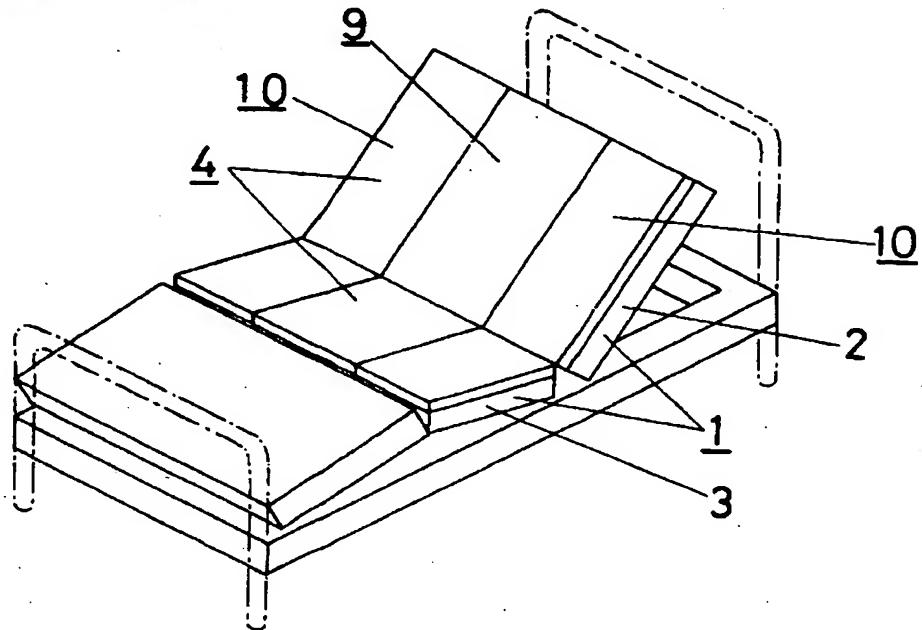
符号 1 下床枠、2 背部下床枠、3 腰部下床枠、4 上床板、5 側部、6 下床、7、7' 側部、8 上床、9 可動

床、 1 0固定床、 1 1作動杆、 1 2、 1 3
.....押上杆、 1 4、 1 4'連結杆、 1 5、 1 6
.....連結杆。 ~~1 7~~~~使用者。~~

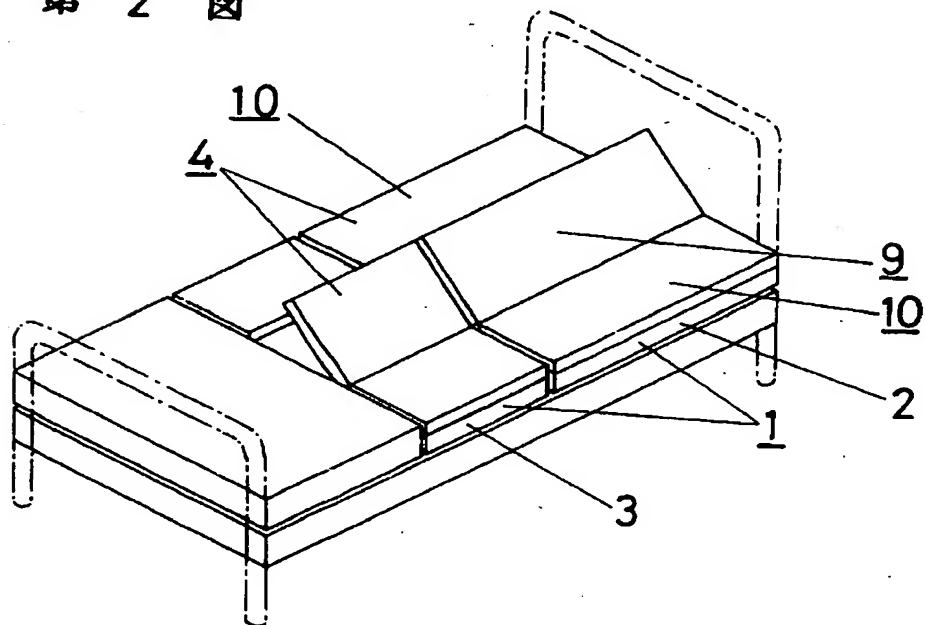
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出願人 木村寝台工業株式会社
代理人 三 背 晃 司

第 1 図



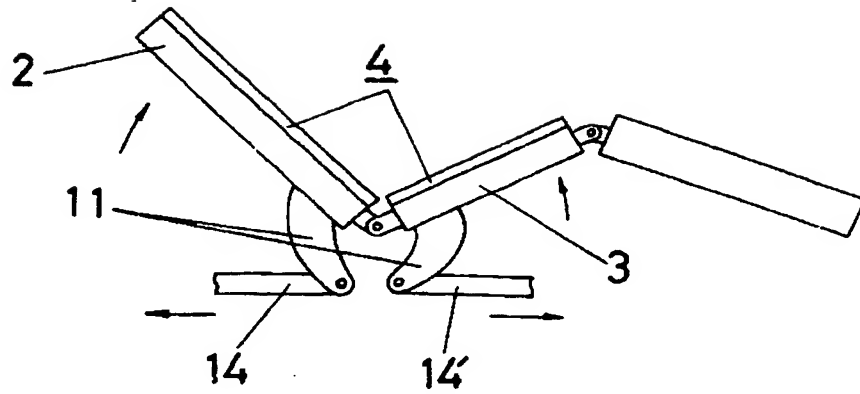
第 2 図



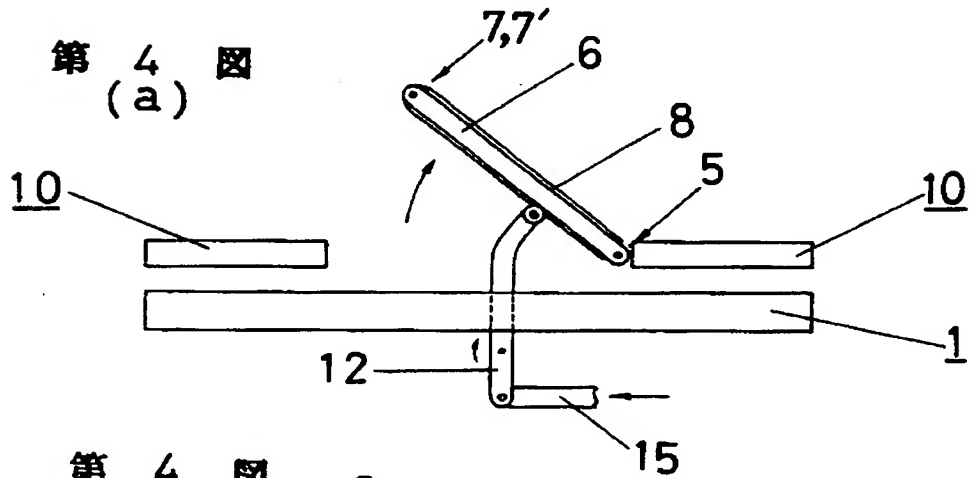
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代理人 三 衛 見 司

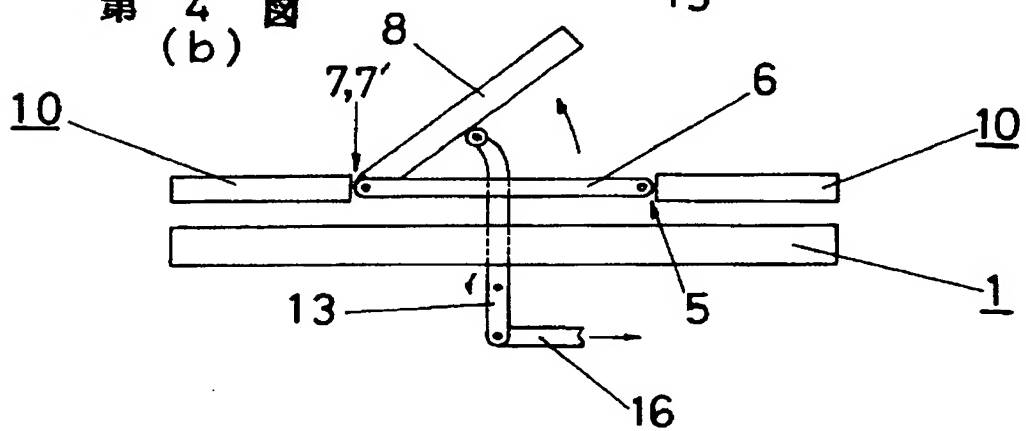
第 3 圖



第 4 圖
(a)



第 4 圖
(b)



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代理人 三 衛 吳 司

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